

## 2. The Datasets Browser

### 2.1. Opening a Local Dataset

When you first start Panoply, a file dialog appears which prompts you to select a netCDF dataset to open. Figure 2.1 shows how this dialog might appear in Mac OS X.

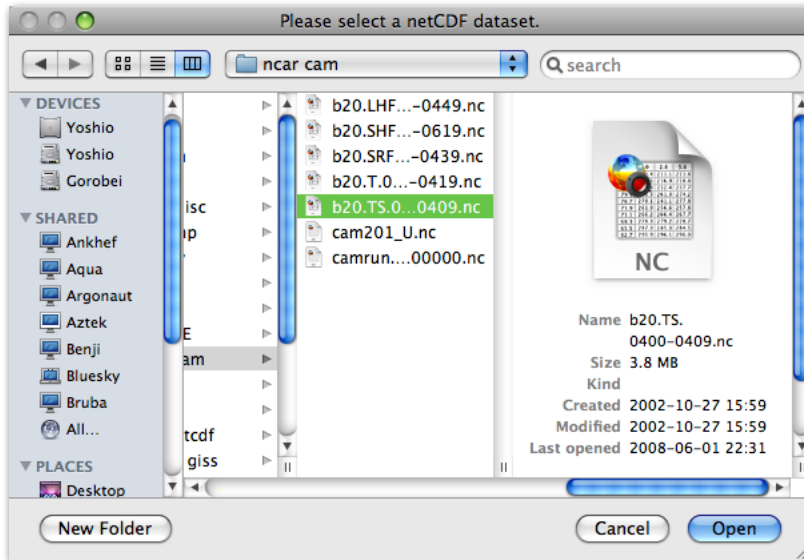


Figure 2.1

Figure 2.2 shows the same dialog in Windows XP\*.

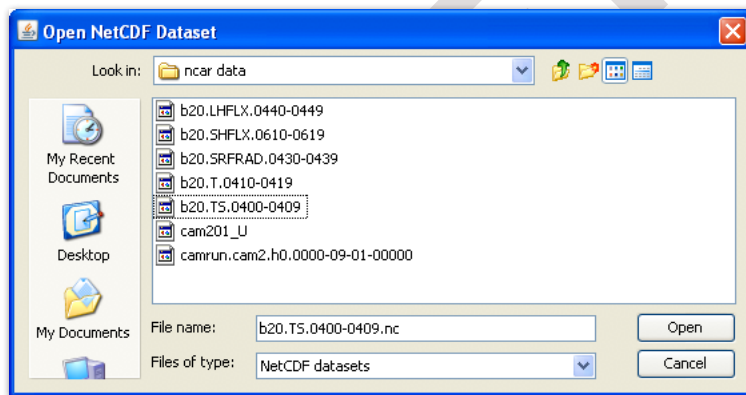


Figure 2.2

Panoply only recognizes files with a `.nc`, `.nc4` or `.ncml` filename extension as being netCDF files that it can open. It will ignore all other file types and also any netCDF files which have not been named with one of those extensions. Some datasets saved using old versions of netCDF may have used the extension `.cdf`. Such usage is deprecated because it conflicts with another Earth science data format which uses that extension, and you should rename such netCDF files to use the `.nc` extension.

To open additional datasets, use the “Open File...” command in the File menu.

\* Hereafter, sample Panoply windows shown in this user guide are as they appear in Mac OS X 10.5. On OS X 10.4 and on Windows and other operating systems, the windows will look somewhat different but will remain the same in essential details such as placement of widgets within the windows.

## 2.2. Opening a Remote Dataset

Panoply can also open netCDF files which are elsewhere on your local network or on the Internet. To select one, use the “Open Remote File...” command in the File menu. This will bring up a dialog, shown in Fig. 2.3, in which you must type the URL of the dataset you want to access.

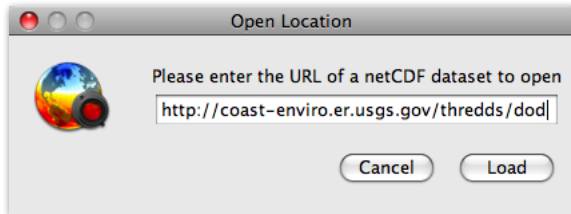


Figure 2.3

Panoply does not immediately download the entire dataset after you identify a remote file to load. Instead it first obtains the basic metadata from the file headers. When you later decide to work with data from the file, it will download the necessary data.

Please note that Panoply can be a little slow when accessing data from such remote datasets. If you are working with a high-resolution data array, some patience may be necessary.

## 2.3. Examining a Dataset

After you have opened a dataset, Panoply displays a window named “Datasets Browser”. In Fig. 2.4, this browser window is showing a single opened dataset containing temperature data.

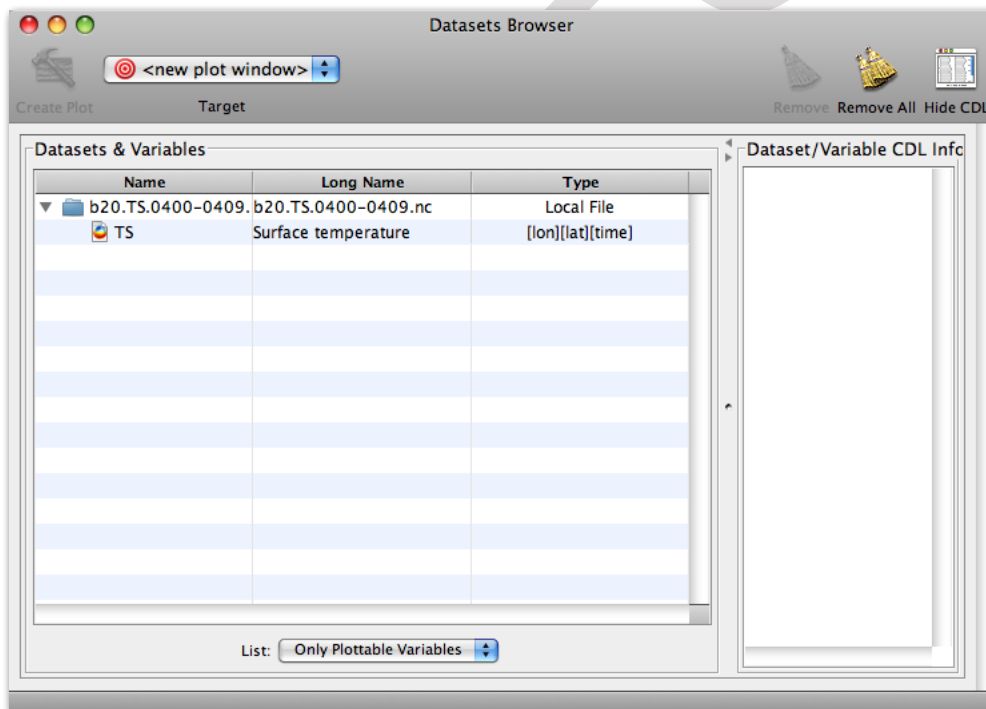


Figure 2.4

The Datasets Browser is divided into three parts: a toolbar strip across the top, a “Datasets & Variables” table at lower left, and a “Dataset/Variable CDL Info” panel at lower right. In Fig. 2.4, the dataset and one variable, called TS, are shown.

But being experienced with using netCDF data, one would expect there to be other variables in the dataset. For example, there should be coordinate variables which define the dimensions of the temperature data. Where are they?

Note that below the Datasets & Variables table is a pop-up menu, which in Fig. 2.4 is set to “Only Plottable Variables.” This means that Panoply has been instructed to only display the variables in this dataset which it has determined that it can draw a plot of\*. To find out what else might be in the file, click on this menu and select “All Variables”.

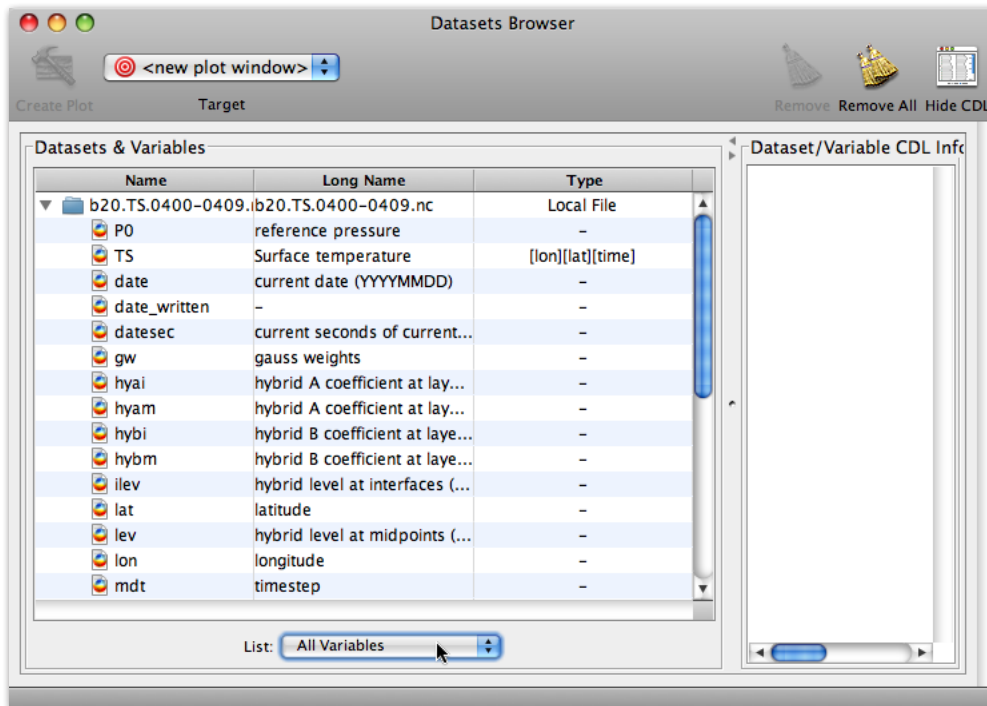


Figure 2.5

Depending on the source of your dataset, there might be a lot of other information in the file. The example dataset used in Figs. 2.4 and 2.5, a file containing NCAR climate model output, includes many variables. But of all the variables in the file, *TS* is the only one which has any information in the Type column, where it says “[lon][lat][time]”. The other variables just show a long dash, indicating they are not considered plottable. This info about *TS* is also a clue of what types of plots can be made from it. We’ll discuss this further in Sect. 3.1.

\* Appendix A discusses how the metadata in a netCDF file should be encoded so that Panoply will recognize variables which it can plot.

In Fig 2.5, the panel on the right-hand side is blank. Descriptive text will appear in that panel when you click on a dataset or variable in the table at left. You will probably need to enlarge the text panel in order to read it. You can do so by dragging the divider between the panels, as in Fig. 2.6.

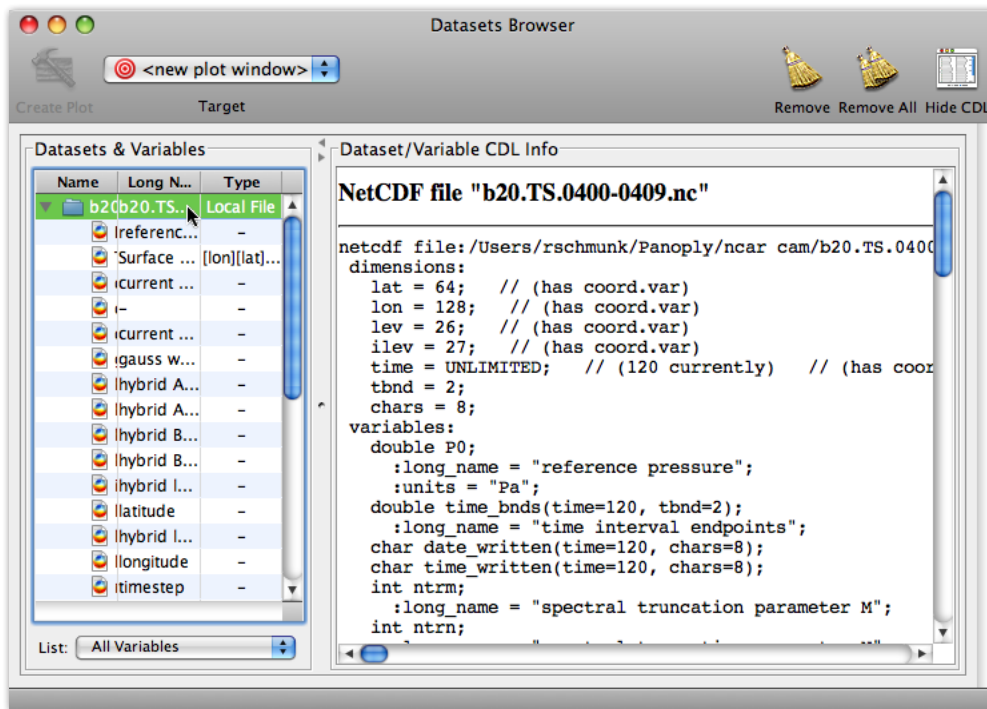


Figure 2.6

The descriptive text is in what is known as CDL notation. If you are familiar with using the command-line programs `ncgen` and `ncdump` to convert a netCDF dataset back and forth to plain text CDL notation, you will recognize this format.

Although the CDL panel is useful when you are examining an unfamiliar dataset, you may find it obtrusive at other times. If so, click on the toolbar button labeled "Hide CDL" on the right side of the toolbar at the top of the Datasets Browser window.

Figure 2.7 demonstrates that when the CDL panel is omitted, the contents of our dataset are shown in a fashion that may be a little easier to read. Also, the “Hide CDL” button has turned into a “Show CDL” button, which you can click on to make the CDL panel visible again. When you become familiar with using Panoply, you are likely to leave the CDL panel hidden much more often than not.

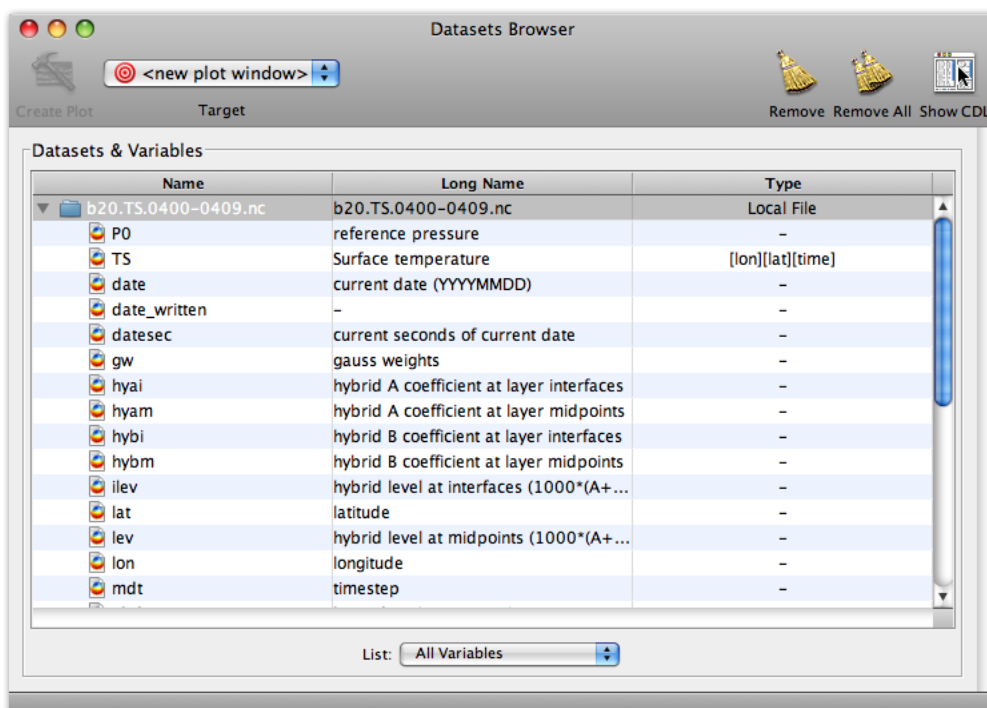


Figure 2.7

Figure 2.7 also highlights the difference between the first two columns in the Datasets & Variables table, which show a variable’s name and long name. The “name” is more like a variable name in a computer program, meaningful but just one word and possibly just a two- or three-character abbreviation. The “long name” is more likely to be a few words long and its meaning more apparent.

## 2.4. Closing a Dataset

If you are done using a dataset in Panoply but still have plots to make with other datasets, you may want to clean up the Datasets & Variables table in the Datasets Browser by closing and removing the unneeded file. To do so, select the dataset in the table by single-clicking on it. Then click on the whiskbroom button at top in the window’s toolbar; this button is labeled “Remove”.

If you wish to close *all* of the datasets that are currently open, click on the double whiskbroom button in the Datasets Browser toolbar. This button is labeled “Remove All”.

If you have a plot window open and try to close a dataset which holds a variable plotted in that window, that dataset cannot be closed by clicking on either the Remove or Remove All button. You must close the plot window first.

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